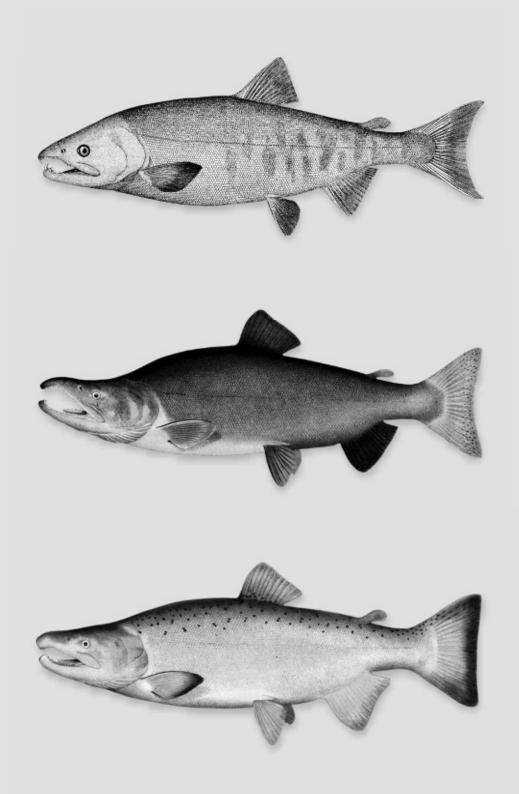
Fish Report No. 3:

Limited Entry—Magnuson Act Fosters a Japanese Market for Alaska Seafood—Tanner crab



Limited Entry

In large part due to the development of the oil industry, Alaska's population was growing rapidly during the early 1970s. The number of people entering the commercial fishing industry was also growing. The Alaska Department of Fish & Game attempted to limit catches to what it considered sustainable, but the effect of each new entrant into a fishery was to reduce the average catch—and income—of all fishermen. This was sometimes to the extent that few could earn a decent income. The situation was especially pronounced in the gillnet salmon fishery, which was relatively inexpensive to enter and did not require as much fishing savvy as many other fisheries. The excess gear in the water also presented a challenge to sound fisheries management: the effort during an "opener" (a segment of a fishing season in a particular location) could be so intense that it was difficult to monitor the catch, and overfishing sometimes occurred.

To rectify this situation, Alaska's legislature passed the Limited Entry Act in 1973.³¹² The act was designed to regulate and control entry into Alaska's fisheries to promote "economic health and stability."313 Generally, the Limited Entry Commission determined how many fishermen each fishery could support and issued transferable permits to those who met requirements for historical participation in the fishery. The program was implemented in the different fisheries over many years, and affected the structure of Glacier Bay's commercial fisheries. The salmon power troll fishery was limited in 1975. It was a different story for the salmon hand troll fishery. At the time the salmon power troll fishery was limited, managers considered the hand troll fishery to be to be a "relatively casual, part-time, and low-effort fishery." The managers hoped that by retaining open access to the hand troll fishery, they could provide entry level opportunities for the young and opportunities for supplemental income for older persons, all while allowing part-time fishermen to pursue their commercial fishing activities. The fishery did not stay casual and low-impact. Significant increases in the number of participants and effort each year from 1975 through 1978 led to a decision in 1979 to impose limited entry in the fishery.³¹⁴ Hand trolling remains particularly important in rural

Southeast Alaska, where opportunities for fulltime employment are scarce.

The Tanner and king crab pot fisheries were placed under a limited entry program in 1984 (see page?), but it was not until 1995 that entry into the Dungeness crab fishery was limited. The halibut fishery is managed by Department of Commerce's National Marine Fisheries Service (NMFS), which chose to regulate it not with a limited entry program but under an individual transferable quota share program that was established in 1995.

Magnuson Act Fosters a Japanese Market for Alaska Seafood

Widespread public concern about overfishing, and concern over technologically sophisticated foreign fishing fleets making substantial catches in traditional fisheries along America's coasts, led to the passage in 1976 of the Magnuson Act.^{TT 315} With this legislation the U.S. asserted sovereign rights to an Exclusive Economic Zone (EEZ) that extended 200 nautical miles from its coastlines. The legislation became effective in March 1977. As was its intent, foreign fleets were eliminated, and a gradual "Americanization" of the fisheries began. Among those who had previously fished Alaska's rich fishing grounds heavily were the Japanese. Denied access to American waters, the Japanese sought to secure supplies of traditional seafood in part by investing in Alaska's fishing industry. Processing facilities were purchased outright, or generous loans were made to U.S. processing companies. The loans were coupled with right-of-first-refusal (ROFR) agreements for the seafood produced. Prices of fish were bid up to unheard-of heights. In Southeast Alaska the Japanese were primarily interested in sockeye and coho salmon, salmon roe, sablefish ("blackcod") and "bairdi" Tanner crab (Chionoecetes bairdi).^{UU}

Tanner Crab

The impact on Glacier Bay proper of the Japanese demand was almost completely limited to Tanner crab. Though the species was shunned in the U.S. in favor of king crab, it was much appreciated in Japan. Tanner crab is traditionally given as a gift at the New Year and during "Golden Week" in the spring. Prior

^{TT} The legislation was amended with substantial input by Alaska Senator Ted Stevens in 1996, and is now commonly referred to as the Magnuson-Stevens Fishery Conservation and Management Act.

UU There are two varieties of Tanner crab: Chionoecetes bairdi, which is discussed above, and the smaller Chionoecetes opilio, which is generally caught in the Bering Sea and often marketed domestically as "snow crab."



Figure 21: Tanner crab vessel Capri, on a snowy but calm day in Glacier Bay. Weather often hampered fishing during this winter fishery. (NPS collection, Bartlett Cove, Alaska)

to the Japanese interest, the harvest of Tanner crab in Alaska had been miniscule.

Tanner crab are true crab (brachyurans) that are found in the eastern North Pacific Ocean and Bering Sea. They feed on a wide variety of marine life that includes worms, clams, snails, other crustaceans, and fish parts. Female Tanner crab deposit 85,000 to 424,000 eggs in an abdominal clutch, where they are fertilized by the male. The fertilized eggs are then extruded onto the female's abdominal flap to incubate for about a year. Young larvae are initially freeswimming, but settle to the ocean floor after about two months. Female crab are mature after numerous molts over approximately five years. Males take about a year longer. Current regulations allow only male Tanner crab with a carapace width of more than 5-1/2 inches to be retained by commercial fishermen. Male Tanner crab of commercial size weigh about 2 to 4 pounds. Females are considerably smaller. Tanner crab are prey species for halibut as well as sea otters.

Petersburg is home port to much of the fleet, which is comprised mostly of salmon seiners and tenders. In 1984, the state's Commercial Fisheries Entry Commission capped the number of fishermen allowed to participate in Southeast Alaska's Tanner crab pot fishery. Tanner crab are caught during the

winter months, sometimes with king crab pots, but predominately with lighter, top-entry conical or pyramid-shaped nesting pots that have the advantage of occupying less deck space (see Figure 21). Prior to 1996, ADF&G regulations limited individual Tanner crab fishermen in Southeast Alaska to fishing a maximum of 100 pots. In 1996 the maximum was reduced to 80 pots. ³¹⁶

There were some efforts in the 1960s by the federal and state governments to assess the extent of the Tanner crab resource and to develop processing technology. Some exploratory fishing for Tanner crab was done in 1962 in Glacier Bay by a private vessel contracted to the U.S. Fish and Wildlife Service. 317 Some Tanner crab were also caught by king crab fishermen during the 1960s, and in 1970 the vessel *Nova* prospected for Tanner crab in lower Glacier Bay. 318

Spurred by the Japanese market, Pelican Cold Storage with the vessel *Gulf Maiden* successfully pioneered the Glacier Bay Tanner crab fishery in the late 1970s. There was, however, a problem with some of the Tanner crab from Glacier Bay: crab caught in the Bay's silty waters had dull, silty shells, which the Japanese—ever conscious of the appearance of food—found unattractive. To be sure, not all

the waters of Glacier Bay are silty, and waters that were silty in the 1970s may be less so to-day. Nevertheless, the Japanese market rejected Tanner crab from Glacier Bay. Pelican Cold Storage continued to purchase Glacier Bay caught Tanners, but paid a lower price than for "clean" crab. Silty-shelled crab were processed for their meat, which was sold on the domestic market. The central area of Glacier Bay provides the majority of the bay's Tanner crab.

Though a secondary fishery for most fishermen, the Tanner crab fishery—with an annual season of less than two weeks—eventually became Glacier Bay's most valuable, as measured by the dollar value of the catch.

